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MEMORANDUM FOR: Deputy Director for Administration

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FILE: Security - 4

25X1 FROM: [Redacted]
Director of Communications

SUBJECT: Request for Approval for Nonofficial Publication

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25X1 1. Attached is a dissertation proposal prepared by [Redacted]
[Redacted] for submission to the University of Southern California (USC) to meet
requirements for the award of a doctorate degree in Public Administration.
[Redacted] will draw upon her experience as an OC manager for the dissertation
but will not disclose CIA affiliation, CIA material or classified information
in the paper. The Director of Communications will review the final product
before it is submitted to USC to ensure that these guidelines are followed.
USC has agreed not to publish the dissertation but will retain one copy in
its Washington library. (C)

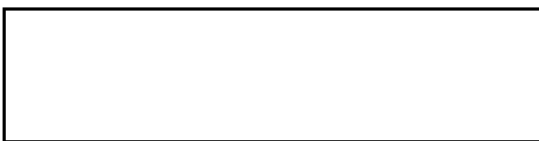
25X1 2. The Office of Public Affairs has offered the opinion that the dis-
sertation as outlined does not contain information described in paragraph b(3)
25X1 of HR [Redacted] and that review by the Publications Review Board is unnecessary
unless the Deputy Director for Administration desires such review. It is
requested that you approve this nonofficial publication as authorized by
HR [Redacted]. (C)



Attachment:
As stated

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APPROVED:



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DISSERTATION PROPOSAL

ANALYSIS OF A PLANNED CHANGE EFFORT IN A COMPLEX
TECHNICAL ORGANIZATION

University of Southern
California
Fall, 1981

STAT

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DISSERTATION PROPOSAL
ANALYSIS OF A PLANNED CHANGE EFFORT IN A COMPLEX TECHNICAL
ORGANIZATION

Introduction

This proposal documents a plan to study in retrospect the significant events and strategies of a change effort at a technical training facility from September 1980 to September 1981. The documentation is based on the perceptions of the public administrator responsible for managing the school, institutional records, memoranda produced by the school's staff members, and data collected from open-ended interviews. The proposal is designed to satisfy the requirements for a dissertation in completion of the doctoral program at the University of Southern California in public administration. In addition, the research is being sponsored by the organization described in the case study as a means of seeking alternative change strategies for managers in a complex technical environment. The potential, therefore, exists for the study to contribute to an ongoing change effort as well as to provide additional insight into organizations as sociotechnical systems.

Organizational Setting

The organizational setting for this study is the communications training facility for a large government agency. The school trains individuals to operate, to maintain, and to manage a worldwide communications network. The curriculum includes a

29-week program for newly-hired operators, a 17-week program for new technicians, a variety of technical courses for training employees on new systems, and special management training courses. School responsibilities also include scheduling academic and contract training for a communications office of about [] and the administration of a correspondence course program.

The communications school is a residency training facility with a staff of [] individuals - about one-half of these employees are instructors. The remaining staff positions are allocated to administrative duties. During Fiscal Year 1981, the budget for the training facility was about [] excluding the costs for personnel services. Because of the specialized nature of the training, the facility contains [] in equipment.

Most courses at the school are concerned with teaching specific skills and much of the training is experimental. Computer-assisted instruction is used for subjects which require rote memorization, such as Morse code. For the most part, however, classes are small; and the instructor/student ratio is low. The number of students varies from 80 to 100 per week, and approximately one-half to three-fourths live at the facility.

The present facility has been in operation []. In keeping with the traditional nature of the organization, the curriculum and training methodology remained relatively constant

over a 15-year span. In 1979, a ten-year systematic plan for upgrading training efforts was approved by the office of communications. The plan called for expanding the school's responsibilities, a complete curriculum review, improving the self-study/correspondence course program, designing more realistic training programs, etc. It was the responsibility of the educational officer assigned to manage the school to begin the implementation process.

Research Proposal

The outline of the research design to document changes at the school from September 1980 to September 1981 appears below:

Analysis of a Planned Change Effort in a Complex Technical Organization

- I. Introduction
- II. Case Study
- III. Literature Review and Theoretical Framework
- IV. Analysis of the Change Effort
 - A. Social System Changes
 - B. Technical System Changes
 - C. Coordination Mechanisms and Interactive Effects
 - D. Summary and Hypothesis
- V. Conclusions

This outline also represents the steps in the research process. The introduction will establish the purpose of the research, describe the relevance of the project as a dissertation in public administration, and outline the contents of the following chapters.

The case study will document the significant events at the communications school which changed the curriculum, organizational structure, and responsibilities of the facility. Pre- and post-force field analyses and a time line of significant events and outcomes will be part of the documentation. In addition, it will be necessary for the researcher to find an appropriate style and framework for presenting information in the case study. Although much of this information will be derived from the perspective of the school's chief administrator, a significant amount of material is documented in the form of planning papers, official records, memoranda for the record, project proposals, etc. To insure accuracy of reporting, staff members at the school and the office director and division chief responsible for the school will be asked to review the case study. Judgment concerning choice of significant events during the year is reserved for the chief administrator since it was her responsibility to manage the change process.

The literature review and the construction of a theoretical framework upon which to base an analysis of effects will focus on change in terms of sociotechnical systems. The selection of sociotechnical systems theory is based on the fact that most of the participants, implicitly and explicitly, accepted that particular framework as a basis of action. The chief of the school and the managers to whom she reported had participated in several team building sessions prior to her assignment as responsible officer at the school. Considerable time at these

sessions was devoted to sociotechnical systems theory, although the social system was of primary concern. Moreover, because of the complex technology required to operate a world-wide communications network, staff employees at the school tended to think in systems terms; although it was the technical system which received primary attention.

The principle sources for constructing the theoretical model are listed below.

Burrell, Gibson and Gareth Morgan. Sociological Paradigms and Organizational Analysis. London: Heinemann Educational Books Ltd., 1979.

Burke, Warner W. and Harvey A. Hornstein. The Social Technology of Organization Development. La Jolla, California: University Associates, Inc., 1972.

Cummings, Thomas G. and Suresh Srivastua. Management of Work: A Socio-Technical Systems Approach. La Jolla, California: University Associates, 1977.

Downs, Anthony. Inside Bureaucracy. Boston: Little Brown and Company, 1967.

Jan, Jong S. and William B. Storm. Tomorrow's Organizations: Challenges and Strategies. Glenview, Illinois: Scott, Foresman and Company, 1973.

Katz, Daniel and Robert L. Kahn. The Social Psychology of Organizations. New York: John Wiley and Sons, Inc., 1966.

Lawrence, Paul R. and Jay W. Lorsch. Developing Organizations: Diagnosis and Action. Reading, Massachusetts: Addison-Wesley Publishing Company, 1969.

Miller, E. J. and A. K. Rice. Systems of Organization: The Control of Task and Sentient Boundaries. London: Tavistock Publications, Ltd., 1967.

Pasmore, William A. and John J. Sherwood, eds. Sociotechnical Systems: A Sourcebook. La Jolla, California: University Associates, 1978.

In addition, the author will conduct a search of current periodicals and professional journals for relevant articles and papers.

The goal of the literature review is to construct a theoretical framework for analyzing the change efforts documented in the case study. Chapter IV of the dissertation will examine the significant events during the year in terms of interventions to either the social system or the technical system. In addition, an effort will be made to assess how coordination of interventions to either system was accomplished; and in keeping with one of the primary tenets of sociotechnical theory, the interactive effects of one system upon the other.

From this analysis a variety of hypotheses should emerge. Three preliminary hypotheses are formulated below:

1. Certain organizational factors (to be determined by analyzing the case study) can be used to assess whether interventions to produce change should be directed to the social system or the technical system.
2. Coordinated changes (boundary management) in an organization's social and technical systems produce a faster rate of change than that expected by the participants.

3. Coordination of planned change (boundary management) produces a faster rate of change than that expected by the participants if there is consensus among those individuals concerning the nature of organizations.

These are preliminary speculations and the purpose of the research effort is to identify hypotheses worthy of further study by the office involved and for other researchers.

The final chapter of the dissertation will contain the learning outcomes derived from the project, and the conclusions and implications relevant to other public administrators.

Research Methodology

The research methodology proposed for this study is a combination of case study research and causal-comparative research.¹ Consequently, the design contains a mixture of the strengths and weaknesses of both methodologies.

According to Isaac and Michael, case study research involves the study of the background, current status, and environmental interactions of a given social unit. One of the strengths of this approach is that it provides useful background information for planning major experimental projects, and the communications school study offers such an opportunity. The project can be regarded as a pilot study for future organizational changes, because the writer is coordinating the research with the office involved.

¹ Isaac, Stephen and William B. Michael. Handbook in Research and Evaluation. San Diego, California: EDITS Publishers, 1975.

As an employee of the communications office, the writer has been tasked with conducting a study that would provide insight to other organization managers as to alternatives available for accomplishing change.

Case studies also contribute examples to illustrate more generalized findings. The study of a small technical training school as a sociotechnical system does contribute to the body of documentation defining organizations as systems. This is particularly true in terms of sociotechnical systems theory because many existing studies tend to be associated with manufacturing, production line, or extraction industries.

The weaknesses of case studies are two-fold. First, there is a narrow focus to the research which limits the validity of generalizations derived from the conclusions. Certainly this is true for the research proposed by this writer. Other components in the communications office or other technical training facilities may not necessarily profit from the conclusions of this study. To offset this problem, the writer will attempt to identify factors which were used to determine the nature of the interventions selected (see Hypothesis 1).

A second consideration is the vulnerability of the study to subjective bias because the researcher's key role in the events described in the case study. With respect to this proposal such bias is unavoidable. The case study will be reviewed by individuals with a variety of perspectives; and if it is acceptable to all concerned, the study will represent reality to the individuals involved in the change effort.

This proposal also contains elements which could be defined as causal-comparative research, or the investigation of possible cause and effect relationships by observing some existing consequence and searching through data for plausible causes. The causal-comparative method is appropriate because it would be impossible to conduct rigorous experimental research with all the requisite controls at the training facility. This research proposal potentially does offer information concerning inter-relationships, sequences, and patterns which could be helpful to other managers.

Nevertheless, the selected method exhibits a lack of control over independent variables, and consequently, the writer is responsible for considering a variety of plausible reasons for linking cause and effect factors. There are also no guarantees that the relevant causal factors will be included in the study, that outcomes may be the result of a combination of factors, or that a particular effect can be caused by several different factors under differing conditions. Also, even determining which variables are causes and which, effects is fraught with difficulties. On the positive side, the methodology does produce hypotheses for more rigorous research and experimentation.

Summary

The case study proposed in this paper is based on an evolutionary research process. The goal of the project is to generate hypotheses concerning change in a complex organization using sociotechnical systems theory. The hypotheses provide areas for further research by other public administrators. The conclusions of the researcher will also be used by the organization described in the case study to plan future change efforts.